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Cockerell, W. P.- A trip to the Truchas peaks, New Mexico. (1903)

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A TRIP TO THE TRUCHAS PEAKS, NEW MEXICO.

WILMATTE PORTER COCKERELL.

THE high mountains of Colorado are continued southward into New Mexico without a break as far as the region of Santa Fe and Las Vegas. Some distance north of this, however, the range forks, presenting roughly the form of a reversed Y. One of the arms of the Y is known as the Las Vegas Range, the other as the Sante Fe range. The Truchas Peaks are in the Sante Fe Range and represent almost the southernmost extension of the Arctic-alpine zone.

The first week in August, 1902, I visited these peaks and collected both flowers and insects. There is no road into the region; and from Blake's ranch, which is just inside the Pecos Forest Reservation we secured a guide, saddle horses and pack animals. The first day we passed over the Las Vegas Range, travelling through beautiful alpine meadows and great stretches of spruce forests. Travelling through this country was very delightful and the long vistas of mountain slopes, with here and there the sparkle of an alpine lake, more than compensated for hard parts of the trail where the horses must be guided carefully as they jumped over the fallen trees. In places where the fire had destroyed the trees the hillsides looked much like a board covered with jack-straws and even our skilful guide sometimes led us into boxes out of which our horses could not climb and we were obliged to retrace our steps and try a new path.

Our first camp was on the Mora fork of the Pecos River: this is a small but very rapid stream that heads in the Truchas, and it is famous through all northern New Mexico for the size and number of trout that it contains. We saw trout (*Salmo spilurus*) in great numbers but the stream was low and very clear so that only a few were hooked.

Some dark purple bells (*Campanula uniflora*) grew here

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among the short grass which covered the open spaces of the valley. The next day's journey took us over grassy slopes dotted with bunches of mountain daisies; growing solitary or rarely in groups of two or three the yellow Mariposa lily (*Calochortus gunnisoni perpulcher*, Ckll.) opened wide its petals showing the purple and yellow center. Small dark bees industriously gathered nectar and pollen from these flowers. It was interesting to see the quick motions with which they pushed the hairs from the glands and sucked the nectar or climbed the filaments and loaded themselves with white pollen from the bursting anthers. The store house was so easily accessible and the stores so abundant that often the small bee overloaded itself and sank into the grass; then there was great buzzing and scrambling and throwing overboard of a part of the load before it could safely take to wing again. Here and there we saw the purple columbine (*Aquilegia cærulea*) with great splendid flowers of purple and white, though the plants were dwarfed like the plants of all high mountains.

Our second camp was made on the Pecos River, which in this region is about six feet across and very rapid. The river course is bordered with spruce with here and there an open grassy glade covered with a sort of bunch grass which proved excellent food for our horses. At the roots of this grass we found several small mice which moved with a curious quick creeping motion.

This grass was full of grass-hoppers, many of the species having no wings. Several large Megachile bees (*M. sapellonis*) were busy on the flowers here and *Argynnis eurynome* and *A. electa* flew from flower to flower. It was curious to see these butterflies going from glade to glade, for they would often rest in the boughs of the spruce trees, usually on the bright silver tips and here the wind would gently rock them back and forward and the sun would glisten on the silver spotted wings!

Along the river bank I collected a gigantic *Pedicularis procera*; it was almost six feet tall and had flowers an inch and a half long. Here we found great patches of Polemonium growing so closely bunched that no other plant could grow among them. There was one such bunch covering a space about ten feet square. A beautiful species of Actæa grew here but though

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the plants were very large there were very few in numbers. Two species of Ribes, *R. wolfii* and *R. lentum*, occurred in the same vicinity.

August the second we climbed the peak to the northeast, and two days later the one farthest southwest. The slope was gradual so that by following the hogback we could ride quite out of timber. Here we found good grass for our horses and after securing them with lariats we left them to feed and walked to the mountain top. Just at the edge of the forest a great patch of gentians were growing along the trail; we had seen the fringed gentian and the bell gentian but this was our first sight of this high alpine flower. The leaves are short and form a thick mat on the ground and from this dark green mass the light lavender bells dotted with dark purple are lifted on a slender flower stalk two to four inches high. The species is *Gentiana frigida*.

A few hundred feet below the gentian field we passed over hillsides covered with splendid dark purple larkspurs (*Delphinium subalpinum*) there were acres and acres of this flower which varied from a deep purple marked with black to a very light purple ridged with white, and like the Polemonium the larkspur grows in thick clusters crowding out even the grass at its roots.

The southwest Truchas we found very difficult to climb and in places we pulled ourselves up by the bunch grass and held our places by digging our heels into the soft earth. All the plants were now reduced to mossy mats hardly more than an inch through.

A tiny primrose grew among the rocks; beautiful dark blue forget-me-nots (*Eritrichium argenteum*) with white woolly leaves and stems were abundant; a Sedum covered large acres and a little phlox (*Phlox condensata*) grew in the shade of the rock.

A bright reddish humming-bird rested on my shoulder. The butterflies flew with swift steady strokes, and were impossible to secure when on the wing. A large black Papilio flew past fluttering for a moment over the rock monument which marked the highest point of the mountain. The *Parnassius smintheus* flew about in numbers; some very worn and broken from long struggles with the high winds which usually prevail in these

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mountain heights. *Argynnis eurynome*, very light green with yellow and silver markings underneath with dark ferruginous above trimmed abundantly with black, flew over the hillsides; the yellow and pink coloration of *Colias scudderi* added to the beauty of the scene. Bumble-bees and flies buzzed about our heads, and great gaudily colored saw flies tangled themselves in our hair. The ants were just swarming and under the rocks we found several species of beetles and spiders.

The view from the top was magnificent. Toward the west the great Rio Grande Valley could be seen bordered by hills which looked to be made of blue mist, so far away they lay. To the north, the south and the west were rugged peaks and wooded ranges everywhere marking the horizon off by curious zigzag lines. Two bald eagles flew through the space to our right — down and then up, darting and sailing and then across until they disappeared from sight.

Notes.

List of Plants collected above timber line. Determined by T. D. A. Cockerell and Aven Nelson.

Eritrichium argenteum Wight, ***Mertensia cælestina*** Nelson & Ckll. (a new species found on this trip [1]), ***Saxifraga chrysantha*** Gray, ***Delphinium nov. sp.***, ***Trifolium*** sp., ***Epilobium angustifolium*** L., ***Senecio holmii*** Greene, determined by Mr. Greenman, ***Gentiana frigida*** Haenke, ***Sedum stenopetulum***, ***Veronica wormskjoldii*** R. & S., ***Phlox condensata*** (Gray) E. Nelson, ***Oxyria digyna*** (L.) Camptdera, Draba ***sp.***, ***Castilleia haydeni*** (Gray) Ckll.

List of insects collected above timber line.

1. Coleoptera. Determined by H. C. Fall. *Amara brunneipennis*, *A. femoralis*, *Tachys nanus*, Aleochara *sp.*, *Pachybrachys hepaticus*, *Hyperaspis fimbriolata*, *Galeruca externa*, *Aphodius aleutus*, Balaninus *sp.*

2. Diptera. Determined by D. W. Coquillett. *Lasiophthicus pyrastri* Linné, *Peleteria ænea* Stæger, *Trypeta occidentalis* Snow.

3. Hemiptera. Determined by O. Heidemann. *Corimelæna nitiduloides* Wolff, *Nysius angustellus* Blanch, *Geocoris limbatus* Stål., *Lygæus turcicus* var. *kalmii* Stål., Irbisia *sp.* near *brachycerus*, Uhler.

4. Lepidoptera. Determined by T. D. A. Cockerell. *Argynnis eurynome*, *Brenthis helena*, *Parnassius smintheus*, *Pyrameis cardui*, *Sciaphila*

[1] Described in *Proc. Biol. Soc. Washington.* March, 1903, p. 46.

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argentana (det. by Dr. Dyar), ***Colias scudderi flavofincta***, ***Lycæna rustica***, ***Plusia hochenwarthi***, ***Colias eurytheme***.

5. Orthoptera. ***Gomphocerus clavatus*** var. ***clepsydra***, ***Melanoplus excelsus*** (det. by Mr. Rehn).

6. Hymenoptera. Determined by T. D. A. Cockerell. ***Bombus frigidus***, ***Bombus ternarius***, ***Bombus flavifrons***,[1] ***Clisodon terminalis***, (on thistle).

7. Ants. Determined by Prof. W. M. Wheeler: — ***Formica fusca subsericea***, ***Formica*** n. sp. (near ***subpolita***), ***Leptothorax canadensis***, n. var., ***Myrmica rubra***, subsp.

Other species of various orders were collected, but have not yet been studied. The above is the first list of the fauna and flora of the Arctic-Alpine zone in New Mexico, excepting the records of insects taken on Taos Peak about thirty years ago by Lieutenant Carpenter.

LAS VEGAS, NEW MEXICO,
April 4, 1903.

[1] ***Bombus flavifrons*** is new to New Mexico. On the same trip, my wife took it also on the top of the Las Vegas Range (about 11,000 ft.). A male from the latter place represents a new variety: —

B. flavifrons var. *veganus*. Anterior part of thorax with yellow hair only; scutellum with a good deal of black; first two abdominal segments with yellow hair; third with black slightly mixed with red; fourth with red; the rest with black. Ventral surface of abdomen with yellow hair; some black hair on front, and on sides of face; some pale orange hair at base of mandibles. Malar space long; first and third joints of flagellum about equal, second conspicuously shorter. Tibiæ with yellow, tarsi with orange hairs. The yellow hair throughout is bright rather pale canary color. Mr. Viereck writes me about this: "There is n't a ♂ in the lot of *B. flavifrons* in the Cresson collection which tallies with your description of var. *veganus*, though the structure is the same. There are a few females which must look more like what you have, so far as pubescence goes. One small worker (9 mm. long) taken at Beulah by Dr. Skinner agrees even better than the specimens just cited, but has all the pale hair whitish. — T. D. A. COCKERELL.

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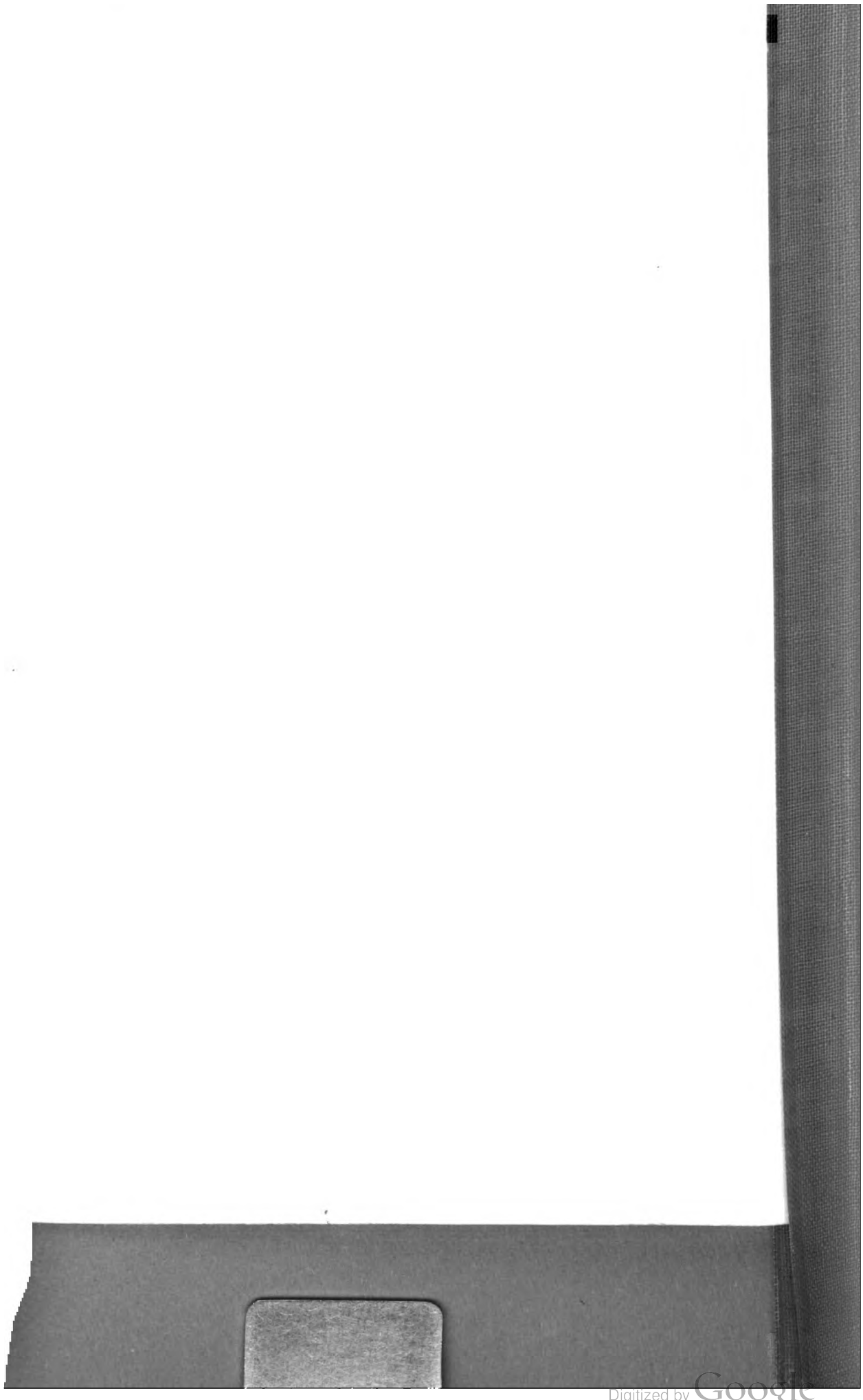
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